

CLAIMS

1. A method for transferring subscriber location information in a network communication system, comprising:

determining the subscriber location information when a subscriber accesses the network;

the network access device converting the accessed subscriber location information into a code in the encoding format of the corresponding field in a message to be sent outwards by the subscriber;

the network access device receiving a message sent from the subscriber, replacing the corresponding field in the message with the determined subscriber location information code, and transferring the message in the network communication system.

2. The method for transferring subscriber location information in a network communication system according to claim 1, wherein said accessed subscriber location information comprises:

network access device ID in the network accessed by the subscriber, slot number of the subscriber interface board in the network access device where the subscriber accesses, port number of the subscriber interface board where the subscriber accesses, and MAC (Media Access Control) address information of the subscriber terminal.

3. The method for transferring subscriber location information in a network communication system according to claim 1, wherein said step of converting the accessed subscriber location information into a code in the encoding format of the corresponding field in the message to be sent outwards by the subscriber comprises:

the network access device converting the accessed subscriber location information into a code in the same encoding format as the MAC address carried in the message to be sent outwards by the subscriber.

4. The method for transferring subscriber location information

in a network communication system according to claim 1, wherein said step of the network access device receiving the message sent from the subscriber, replacing the corresponding field in the message with the determined subscriber location information code, and transferring the message in the network communication system comprises:

the network access device receiving the message sent from the subscriber;

the network access device replacing the source MAC address information carried in the message sent from the subscriber with the determined subscriber location information code, and sending the message to the access server.

5. The method for transferring subscriber location information in a network communication system according to claim 4, wherein

said network access device is a broadband access device in a broadband network;

said access server is a BRAS (Broadband Remote Access Server) or a network device with BRAS function in a broadband network.

6. The method for transferring subscriber location information in a network communication system according to claim 5, further comprising:

configuring a correspondence between the physical subscriber location information and the subscriber location information code in the broadband access device;

configuring a correspondence between the subscriber location information code and the physical subscriber location information in the broadband access server, or configuring a correspondence between the subscriber location information code and the physical subscriber location information in a Radius Server (remote authentication server).

7. The method for transferring subscriber location information in a network communication system according to claim 4, further comprising: replacing the destination MAC address in the message

to be sent by the network access device from its network-side port to the subscriber with the MAC address of the subscriber terminal, and then sending the message to the subscriber.

8. The method for transferring subscriber location information in a network communication system according to claim 3, wherein said step of converting the accessed subscriber location information into a code in the same encoding format as the MAC address carried in the message to be sent outwards by the subscriber comprises:

the network access device encoding the subscriber location information into a 48-bit subscriber location information code in the encoding format of MAC address.

9. The method for transferring subscriber location information in a network communication system according to claim 8, wherein said subscriber location information code comprises:

one or more indexes of broadband access device number, device frame number, slot number, and port number that are required to identify the subscriber location information;

one or more indexes of MAC address, priority, protocol encapsulation mode, subscriber type, and PVC (Permanent Virtual Connection) ID of the subscriber terminal that describe subscriber characteristics.

10. The method for transferring subscriber location information in a network communication system according to claim 8, wherein said 48-bit subscriber location information code comprises:

24 bits, content determined by network access device manufacturers; 5 bits, index of MAC address and/or PVC ID of the subscriber terminal; 7 bits, index of the network access device ID; 7 bits, index of the access port number; and 5 bits, index of slot number of the subscriber interface board where the subscriber accesses.

11. The method for transferring subscriber location information in a network communication system according to claim

9, wherein said subscriber location information encoding comprises:

mapping the physical subscriber location information to the subscriber location information code through direct mapping; or
converging the physical subscriber location information to an intermediate variable ID, and then mapping the intermediate variable ID to the subscriber location information code.

12. The method for transferring subscriber location information in a network communication system according to claim 3, wherein said step of the network access device receiving the message sent from the subscriber, replacing the corresponding field in the message with the determined subscriber location information code, and transferring the message in the network communication system comprises:

the network access device receiving the message sent from the subscriber;

the network access device replacing the source MAC address information carried in the message sent from the subscriber with the determined subscriber location information code, and sending the message to the access server.

13. The method for transferring subscriber location information in a network communication system according to claim 9, wherein said 48-bit subscriber location information code comprises:

24 bits, content determined by network access device manufacturers; 5 bits, index of MAC address and/or PVC ID of the subscriber terminal; 7 bits, index of the network access device ID; 7 bits, index of the access port number; and 5 bits, index of slot number of the subscriber interface board where the subscriber accesses.